

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 279/04187	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/IL04/00903	International filing date (<i>day/month/year</i>) 28 September 2004 (28.09.2004)	(Earliest) Priority Date (<i>day/month/year</i>) 29 September 2003 (29.09.2003)
Applicant BAMBOO MEDIACASTING LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

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Box IV TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

A method of multicasting a data file. The method includes transmitting a notification on an upcoming multicast transmission to a plurality of receivers (20) designated to receive the multicast transmission, tuning by at least one of the plurality of receivers (20) to one or more multicast channels, responsive to the notification, transmitting a data file, from a data server (42), on the one or more multicast channels, without the data server (42) receiving acknowledgments from the receivers (20) on whether they received the notification, determining receivers (20) designated to receive the multicast transmission that did not receive at least a portion of the data file; and attempting to deliver the data file to the determined receivers (20).

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04L 12/28, 12/56; H04H 1/00

US CL : 370/390, 312, 432

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 370/390, 312, 432, 391, 392, 389, 328, 329, 230, 231, 395.2; 713/189, 190, 191

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0038441 A1 (EGUCHI et al) 28 March 2002 (28.03.2002), see entire document.	1-2,4-6,31-36,66-73,83-90
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Y		3,7-30,37-82
Y	US 2003/0007499 A1 (RAJAHALME) 09 January 2003 (09.01.2003), see entire document.	3,11-18,19-30,37-82
Y	US 2003/0100325 A1 (PAILA et al) 29 March 2003 (29.03.2003), see entire document.	7-30
Y	US 2003/0046539 A1 (NEGAWA) 06 March 2003 (06.03.2003), see entire document.	19-30,37-65,74-78



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		*T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

09 February 2005 (09.02.2005)

Date of mailing of the international search report

23 MAR 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
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Authorized officer

Brian Nguyen

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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
PAUL FENSTER
FENSTER & COMPANY, INTELLECTUAL PROPERTY
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P.O. BOX 10256
PETACH TIKVA, ISRAEL 49002

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 279/04187		Date of mailing (day/month/year) 23 MAR 2005
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/IL04/00903	International filing date (day/month/year) 28 September 2004 (28.09.2004)	Priority date (day/month/year) 29 September 2003 (29.09.2003)
International Patent Classification (IPC) or both national classification and IPC IPC(7): H04L 12/28, 12/56; H04H 1/00 and US Cl.: 370/390, 312, 432		
Applicant BAMBOO MEDIACASTING LTD.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Brian Nguyen Telephone No. (571) 272-3034
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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>3,7-30,37-82</u>	YES
	Claims <u>1,2,4-6,31-36,83-90</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-90</u>	NO
Industrial applicability (IA)	Claims <u>1-90</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Please See Continuation Sheet

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 42 objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: Claim 42 should be dependent on claim 41.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-2, 4-6, 31-36, and 83-90 lack novelty under PCT Article 33(2) as being anticipated by Eguchi et al (2002/0038441).

Regarding claims 1-2, 4-6, 31-36, 83-90, Eguchi discloses a method for multicasting a data file comprising transmitting a notification (announcement) on an upcoming multicast transmission to a plurality of receivers (clients) designated to receive the multicast transmission; tuning by at least one of the receivers to one or more multicast channels, responsive to the notification (see paragraphs 0061-0062); Transmitting a data file, from a data server (server), on the one or more multicast channels, without the data server receiving acknowledgement from the receivers on whether they received the notification (see paragraphs 0064-0065); determining receivers designated to receive the multicast transmission that did not receive at least a portion of the data file; and attempting to deliver the data file to the determined receivers (see paragraph 0011).

Claims 3 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi in view of Rajahalme (2003/007499).

Regarding claims 3 Eguchi does not specifically disclose unicast communication. However, Rajahalme discloses determining whether to use multicast, unicast, or a combination (see abstract and paragraph 0004). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to determine whether to use multicast or unicast as taught by Rajahalme in the system of Eguchi in order to effectively use of system bandwidth.

Claims 7-10 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi in view of Paila et al (2003/0100325).

Regarding claims 7-10, Eguchi does not specifically disclose determining whether to tune onto the one or more multicast channels. However, Paila discloses this limitation (see paragraph 0015). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to tune onto a multicast channel as taught by Paila in the system of Eguchi in order to control the receiving of the multicast channels.

Claims 11-18 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi in view of Rajahalme (2003/007499) and Paila et al (2003/0100325).

Regarding claims 11-18, Eguchi discloses all the claimed subject matter as described in previous paragraph except for the use of unicast and determine whether to tune onto the multicast channels. However, Rajahalme discloses multicasting (see abstract and paragraph 0004) and Paila discloses determine whether to tune onto the multicast channels (see paragraph 0015). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the techniques as taught by Rajahalme and Paila in the system of Eguchi in order to meet specific needs.

Claims 19-30 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi in view of Rajahalme (2003/007499) and Paila et al (2003/0100325) and Negawa (2003/0046539).

Regarding claims 19-30, Eguchi discloses all the claimed subject matter as described in previous paragraph except for the use of unicast, determine whether to tune onto the multicast channels, and encryption/decryption. However, Rajahalme discloses multicasting (see abstract and paragraph 0004) and Paila discloses determine whether to tune onto the multicast channels (see paragraph 0015) and Negawa discloses encryption/decryption (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the techniques as taught by Rajahalme and Paila and Negawa in the system of Eguchi in

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

order to meet specific needs.

Claims 37-65 and 74-78 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi in view of Rajahalme (2003/007499) and Negawa ((2003/0046539).

Regarding claims 37-65, Eguchi discloses a method of receiving a data file provided in a multicast transmission (see paragraph 0061-0062 and 0064-0065). Eguchi does not specifically disclose a mobile station or encryption/decryption. However, Rajahalme discloses a mobile station (see paragraph 0015) and Negawa discloses encryption/decryption (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the techniques as taught by Rajahalme and Negawa in the system of Eguchi in order to meet specific needs. Note that encrypting or not encrypting and providing decryption keys before or after transmitting encrypted file are the matter of choice.

Regarding claims 74-78, Eguchi discloses a method of receiving a data file provided in a multicast transmission including the use of IP address (see figure 1; paragraph 0061-0062 and 0064-0065). Eguchi does not specifically disclose a mobile station or encryption/decryption. However, Rajahalme discloses a mobile station (see paragraph 0015) and Negawa discloses encryption/decryption (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the techniques as taught by Rajahalme and Negawa in the system of Eguchi in order to meet specific needs.

Claims 66-73 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi (2002/0038441).

Regarding claims 66-73, Eguchi discloses a method for transmitting multicast data as described in previous paragraph including a reception rate (see paragraph 0051 and 0062). Eguchi does not specifically disclose the reception rate of the multicast data lower than 100%. However, it is obvious that the reception rate of the multicast data will be less than 100% because some data could be lost during transmission.

Claims 79-82 lack an inventive step under PCT Article 33(3) as being obvious over Eguchi (2002/0038441) in view of Rajahalme (2003/0007499).

Regarding claims 79-82, Eguchi discloses a method of transmitting multicast data in a cellular network as described in previous paragraph and Rajahalme discloses multicast delivery in a communication network comprises a mobile station and a base station as shown in figure 1. Eguchi in view of Rajahalme does not specifically disclose dropping data by one or more of the base stations based on the allocated bandwidth. However, dropping data to meet the bandwidth limitation is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to drop data in order to keep the bandwidth usage under control.